

11 inventions by Utahns gain U.S. patents

By Barton J. Howell



PATENTS

for use in the reservoir of a toilet. Filed Oct. 10, 1989, a continuation

Nine mechanical and two chemical inventions by Utah inventors have been granted patents by the U.S. Patent Office.

John P. Pasquin, West Valley City. A flush valve assembly

of application March 21, 1989. Patent 5,005,225.

E. Cordell Lundahl, Providence, and Laurel H. Jensen, Hyrum. A crop processor using conveyor augers. Assigned to Ezra C. Lundahl Inc., Logan. Filed Feb. 13, 1990. Patent 5,005,342.

Norman Van Patten, Springville; Blaine Van Patten, Palo Verde, Calif. and Vernon Dillenbeck, Orem. A hydrogen gas-filled balloon signalling system. Assigned to Norman Van Patten, Springville, and Blaine Van Patten, Palo Verde, Calif. Filed Feb. 23, 1990, a continuation of applica-

tion May 1, 1989. Patent 5,005,513.

Stephen C. Jacobsen, Edwin K. Iversen and David F. Knutti, all of Salt Lake City. A servovalve apparatus for use in fluid systems. Assigned to Sarcos Group, Salt Lake City. Filed Jan. 31, 1990. Patent 5,005,600.

George R. Pipes, Salt Lake City. Brake mechanism for a storage and retrieval machine. Assigned to Eaton-Kenway Inc., Salt Lake City. Filed Dec. 20, 1989. Patent 5,005,681.

Keven Taylor, Salt Lake City. Jet ski transporter carriage and related methods. Filed Oct. 16, 1989.

Patent 5,005,846.

Milo Baughman, Salt Lake City. A retractable/extensible staircase apparatus for access to the floor of a vehicle. Filed Dec. 29, 1989. Patent 5,005,850.

George R. Pipes, Salt Lake City. Wheel mounting assembly for a storage and retrieval machine. Assigned to Eaton-Kenway Inc., Salt

Lake City. Filed Oct. 2, 1989. Patent 5,005,912.

Fred T. Smith and Fred P. Smith, both of Alpine. Apparatus for transferring refuse from containers into refuse equipment. Assigned to Waste Management of North America Inc., Oak Brook, Ill. Filed March 15, 1989. Patent 5,006,030.

Steven S. Davis, Farmington. Apparatus for shifting filter plates in a filter press. Assigned to Envi-

rotech Corp., Menlo Park, Calif. Filed Feb. 21, 1989, a continuation of patent 4,806,239. Patent 5,006,241.

Anil V. Virkar, Salt Lake City. Stabilized bismuth oxide ceramic composition. Assigned to Gas Research Institute, Chicago, Ill. Filed April 24, 1989. Patent 5,006,495.

William T. Dalebout and Ty Measom, both of Logan. Treadmill with siderail. Filed Jan. 19, 1989. Design patent 316,124.

3 patents awarded to inventors in Utah during the past week

By Barton J. Howell



PATENTS

Only three patents were awarded to Utah inventors since those reported last week in this column. The inventions are a prosthetic implant seating procedure, a beverage carton carrier, and an electronic memory access controller.

Harold K. Dunn, 1231 Chandler Circle, Salt Lake City. A process for verifying proper friction coupling of

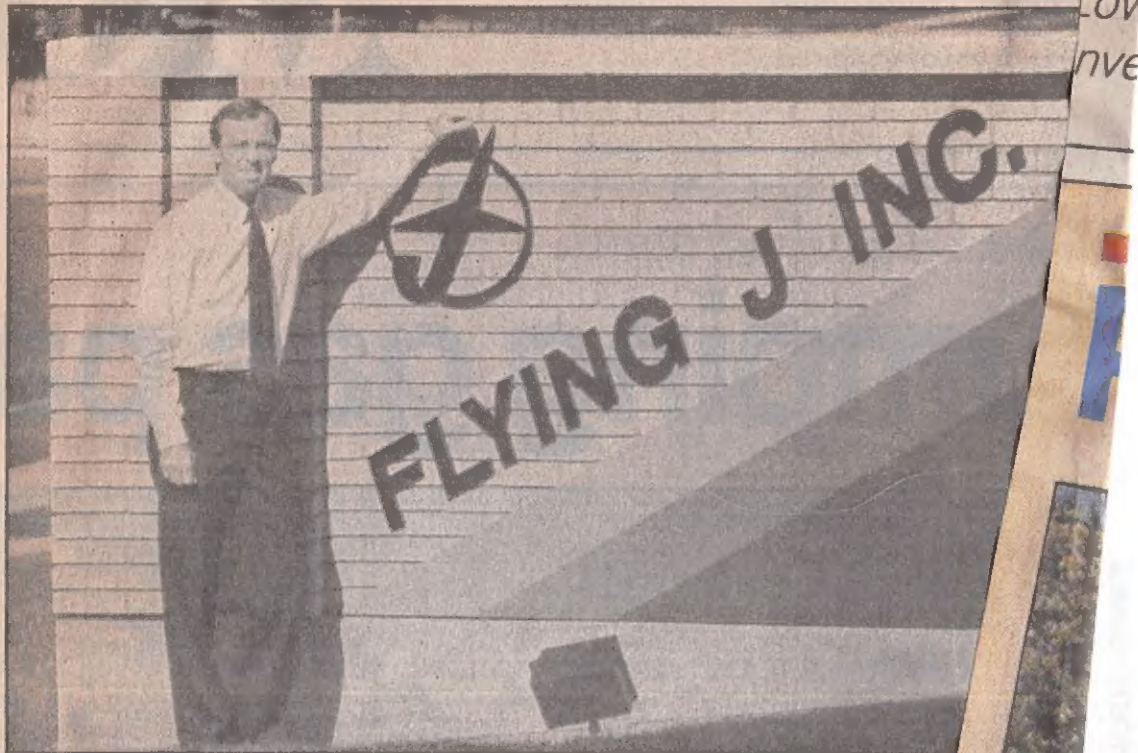
a prosthetic hip implant. Filed Oct. 4, 1988. Patent 4,922,898.

Stanford W. Bird, 745 Three Fountains Circle, Salt Lake City. A carrier for a carton-type, tapered container. Filed April 20, 1989. Patent 4,923,082.

Shaun V. Savage, Bountiful, and Johnny M. Harris, Woods Cross. A direct memory access controller with direct memory to memory transfers. Assigned to Unisys Corporation, Blue Bell, Pa. Division of application Nov. 15, 1985. Filed Oct. 7, 1988. Patent 4,924,427.

Copies of patents may be obtained for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

Executive focus



PHOTOGR

Name Barre G. Burgon

Title, company or firm.
Vice president, secretary, treasurer and corporate
counsel, Flying J. Inc. 6-17-90

VITAL STATISTICS

Age: 39.

Where born: Salt Lake City.

Family: Wife, Karen, and children, Robert, Richard, Rebecca, Stephanie and Staci.

Education: Bachelor of Science, Utah State University, and Juris Doctorate, University of Puget Sound School of Law.

Primary products: Petroleum products.

Primary markets: Interstate motoring public, petro-

leum product retailers and job

Number of employees: 3,800.

Annual sales: \$500,000,000.

PERSONALITY PROFILE

First "real" job: Outdoor major
city campus.

Management style: Pleasant
reason and helpful but exp

Strategy for success: Know
than the competition.

A memorable failure: Sev

Heroes: My father, Glad
and Rex Lee.

Leisure time and hobby
and snow skiing.

Favorite book and m
World"; "Endless Sum

6 inventions win U.S. patents

By Barton J. Howell 7/1/90



PATENTS

Six patents were awarded Utah inventors by the United States Patent Office. They include a tire-shredding apparatus and a joint seal for concrete highways.

John C. Brewer, Salt Lake City. A shredding mechanism and a tire feeding structure. Assigned to Garbalizer Machinery Corp., Salt Lake City. Filed Feb. 27, 1989. Patent 4,927,088.

Michael C. Belangle, 27 Q Street,

Salt Lake City 84103. A sealed joint between adjoining slabs of concrete in a highway or other area subject to vehicular traffic. Filed May 3, 1988, as a continuation of application Jan. 9, 1987. Patent 4,927,291.

E. Marlowe Goble, 850 E. 1200 North and W. Karl Somers, 651 N. 150 West, both of Logan 84321, and David McGuire, 3418 Lakeside Drive, Anchorage, AK 99515. A process of endosteal fixation of a ligament within the interior of a bone. Filed May 15, 1989. Patent 4,927,421.

Nabil N. Youssef, 2168 N. 1450 East, North Logan, and Gene W.

Miller, 935 S. 400 East, Providence, both 84321. A method of preparing a plant nutritive soil amendment material. Filed May 13, 1988, as a continuation of application Dec. 1, 1986. Patent 4,927,447.

Duane Erickson, 3170 S. 1000 East, Salt Lake City 84106. A method of fletching arrows. Filed May 15, 1989. Patent 4,927,478.

James D. McGregor, Logan. Method of making continuous reinforcement for flexible bearing laminate. Filed Feb. 3, 1989, a division of application April 14, 1988. Patent 4,927,481.

Copies of patents may be obtained for \$1.50 from Box 9, Patent and Trademark Office, Washington, DC 20231.

Researchers identify gene that is cause of disease

■ **Breakthrough:** NF1 is common inherited illness. Teams at U. and Michigan make discovery.

JoAnn Jacobsen-Wells and Lee Davidson
Deseret News staff writers

7-13-90

WASHINGTON — Two teams of U.S. investigators, including one from the University of Utah Medical Center, announced Thursday they have identified and cloned the gene that causes one of the most common inherited diseases in humans.

It's neurofibromatosis type 1 — a disease that can cause blindness from tumors in the nervous system and the eye, kidney disorders and, occasionally, mental retardation.

People with neurofibromatosis type 1 also have an increased risk for developing cancer.

The facial distortions NF1 may cause from tumors led to its popular name — Elephant Man's disease. However, Joseph Merrick, the 19th century man featured in the play and movie "Elephant Man," actually suffered from another disease that causes similar tumors.

The teams' finding, hailed as one of medicine's most significant discoveries, was announced at a news conference at the National Press Club. A scientific paper on the Utah team's finding is reported in the July 13 issue of Cell Magazine. Science is publishing a paper by a group from the University of Michigan.

Please see GENE on B2

GENE

Continued from B1

"We see this as the first round of closure of what has been a 10-year adventure," said Dr. Raymond L. White, professor and co-director of the George S. and Dolores Dore' Eccles Institute of Human Genetics and investigator at the Howard Hughes Medical Institute. "So for us in the gene-chasing group, this is far and away the most important discovery that has been made."

Neurofibromatosis type 1 affects about 1 in 4,000 newborns — as many as 100,000 U.S. citizens and approximately 1 million people worldwide. Children of parents with a defective NF1 gene stand a 50 percent chance of developing the disease.

Sixty percent of people with NF1 never experience any health problems; they merely exhibit these symptoms: benign tumors around peripheral nerves and the brown, "cafe-au-lait" birth spots.

Because the remaining 40 percent may experience serious problems, three U.S. research groups and one in England have dedicated efforts to identifying the disease-causing gene.

Currently in the United States, there's a National Neurofibromatosis Foundation, "which has been hanging by its fingernails waiting for this thing to come along," White said.

Announcing the historic findings Thursday with the Utah group was Dr. Francis Collins and his team from the University of Michigan — which like White also performs research for the Howard Hughes Medical Institute.

Collins said although more people have NF1 than Huntington's disease and muscular dystrophy combined, it has been a neglected disease among researchers.

"There are several possible reasons. The cosmetic effects that these patients suffer from have contributed to their disenfranchisement by society," he said.

"Furthermore, I think families with this disorder are often the subject of economic discrimination be-

7 Utahns win patents for inventions in chemistry, electronics, mechanics

■ Innovations:

Interlocking floor tiles, gas generating compositions are among new products.

By Barton J. Howell



PATENTS

Four of the seven patents granted to Utah inventors are chemical in nature. The others are electronic and mechanical.

Daniel Kotler, 6233 Canyon Cove Circle, Salt Lake City 84121.

An array of interlocked modular tiles forming a floor covering that provides enhanced traction at its playing surface and improved tolerance to sudden lateral movement. A continuation of Patent 4,860,510 (1988). Filed Feb. 6, 1989. Patent 4,930,286.

Lee F. McKenzie, Riverton, and Lawrence D. Lawrence, Sandy. An emulsion explosive containing a polymeric emulsifier. Assigned to IRECO Incorporated, Salt Lake City. Filed Mar. 3, 1989. Patent 4,931,110.

Robert B. Wardle, Logan; Jerald C. Hinshaw, Ogden, and Robert M. Hajik, Willard. Gas generating compositions containing nitrotriazalone. Assigned to Morton International, Inc., Chicago, Ill. Filed Nov. 20, 1989. Patent 4,931,112.

Timothy J. Laros, Salt Lake City. Flocculating agent combinations for mineral slime filtration systems. Assigned to Envirotech Corporation, Menlo Park, Calif. Filed Dec. 27, 1988. Patent 4,931,190.

You H. Bae, Salt Lake City; Teruo Okano, Urayasu, Japan, and Sung W. Kim, Salt Lake City. A three-dimensional interpenetrating polymer network for the substantially continuous release of a drug. Assigned to University of Utah, Salt Lake City. Filed June 14, 1988. Patent 4,931,287.

J. Bart Czirr, Mapleton, and Gary L. Jensen, Orem. A neutron spectrometer comprising a scintillator-moderator, a Li-6 doped glass plate, a photodetector means, and electronic circuitry for measuring the energy of incident neutrons. Assigned to Brigham Young University, Provo. Claims priority, application United Kingdom Aug. 5, 1987. Filed Apr. 25, 1989. Patent 4,931,649.

James W. Fosgate, Heber. A variable matrix decoder for the phonetic reproduction of sound. Assigned to Fosgate, Inc., Heber City. Filed Jan. 11, 1988. Patent 4,932,059.

Copies of patents may be obtained for \$1.50 from Box 9, Patent and Trademark Office, Washington D.C. 20231.

11 patents for tech

By Barton J. Howell



PATENTS

Nine patents covering a variety of technological inventions and two design patents were awarded Utah inventors.

Charles D. Baker, Sandy; Owen D. Brimhall, West Valley City, and James E. Messinger, Salt Lake City. An electronic level using ferromagnetic fluid. Assigned to Technical Research Associates Inc., Salt Lake City. Filed March 1, 1989. Patent 4,932,132.

Sven E. Anderson, Sandy. A cradle assembly for supporting a conveyor belt under a loading zone. Assigned to Baker International Corp., Orange, Calif. Filed May 20, 1988, a continuation of application July 14, 1986. Patent 4,932,516.

Rick J. Martinsen, 635 N. Vernal Ave., Vernal, 84078. Racking pallet for oil field drill-pipe sections. Filed

Curt G. Bingham and William T. Dalebout, both of Logan. A semi-recumbent exercise cycle. Assigned to Proform Fitness Products Inc., Logan. Filed Jan. 13, 1989. Patent 4,932,650.

Young J. Kwon, Fruit Heights. A process for producing a ZrO2 powder of very fine particle size for use in making high-density ceramics. Assigned to Westinghouse Electric Corp., Pittsburgh, Pa. Filed Jan. 30, 1987. Patent 4,933,154.

Marvin A. Jarvis, 301 S. Salem Hills Drive, Elk Ridge 84651, and Larry A. Testa, Candlewood Isle, New Fairfield, CN 06810. Method for the continuous solution polymerization of methyl methacrylate. Filed Feb. 26, 1988, a continuation of application Sept. 19, 1983. Patent 4,933,400.

Dennis W. Gifford, 1237 Brickyard Road, #304, Salt Lake City, 84106. A method for vacuum-processing food products for increased pasteurization and extended shelf-

Utah inventors' patents, designs

life. Filed Feb. 10, 1989. Patent 4,933,411.

Wendell A. Gibby, 695 E. 1700 North, Mapleton, 84664. A magnetic resonance contrast enhancing agent comprising a chelating agent. Filed April 17, 1989, a continuation-in-part of application Jan. 27, 1987. Patent 4,933,441.

Raymond T. Perkins, James M. Thorne, Larry V. Knight and Richard C. Woodbury, all of Provo. A radiation detector window structure and method of manufacturing. Assigned to Brigham Young University, Provo. Filed Jun. 6, 1988. Patent 4,933,557.

The following two design patents were issued:

Sandra C. Peart, 4734 Harbor, West Valley City, 84120. A neckband for displaying pins. Design patent 308,438.

John E. Cassity, 12575 S. 1450 West, Riverton, 84065. An extensible cradle support for recreational vehicle drain hose or similar article. Design patent 308,479.

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7-25-90
Block
Scar tissue
in
Rats

Lighter-than-air vehicle is among Utah inventions to receive U.S. patents

By Barton J. Howell



PATENTS

Rollin F. Christopherson, 5756 S. Willowood Lane, South Ogden 84403. A ball valve. Filed March 3, 1989. Patent 4,934,408.

David O. Martin, Salt Lake City. Tension strut apparatus and method for an overhead garage door. Assigned to Martin Door Manufacturing Inc., Salt Lake City. Filed June 5, 1989. Patent 4,934,439.

Joseph F. Womack Jr., Ogden, and **Rodney L. Griffin**, Roy. A pressurized fluid injection method and means. Assigned to Westinghouse Electric Corp., Pittsburgh, Pa. Filed Dec. 19, 1988. Patent 4,934,569.

Steven C. Evans, North Ogden. A method of comminuting reactive metals. Assigned to Westinghouse Electric Corp., Pittsburgh, Pa. Filed

Oct. 16, 1989. Patent 4,934,610.

Louis G. Birbas, St. George. A lighter-than-air type vehicle. Assigned to Ulysses Corp., St. George. Filed Jan. 9, 1989. Patent 4,934,631.

Larry Ashton, Provo; **Roland J. Christensen**, Fayette; and **Randy L. Crane**, West Jordan. Apparatus for forming hollow structures from powdered thermoplastic materials. Assigned to Fiber Technology Corp., Provo. Filed March 7, 1988, a division of application Aug. 16, 1984. Patent 4,934,917.

Errol P. EerNisse, Salt Lake City; **Roger W. Ward**, Park City; and **O. Lew Wood**, Murray. A crystal resonator with low acceleration sensitivity and method of manufacture. Assigned to Quartztronics Inc., Salt Lake City. Filed July 13, 1988, a continuation-in-part of Patent 4,837,475. Patent 4,935,658.

Dal Gordon, 11025 S. 1700 West, South Jordan 84065, was awarded a design patent (308,614) for a protective cushion attachment for a shopping cart seat. Filed April 6, 1987.

Copies of patents may be obtained for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

Utah inventors gain 9 patents on creations ranging from airtight door to X-ray imaging

By Barton J. Howell



PATENTS

Kay Ruggles, 2928 Oakridge Drive, Salt Lake City 84109. A swivel shutter assembly. Filed June 12, 1989. Patent 4,936,048.

Leslie N. Hansen, 528 Saguaro, Washington 84780. An airtight door assembly. Filed June 26, 1989. Patent 4,936,049.

James W. Andrew, Salt Lake City. A rocket motor comprising a propellant grain bore that varies in diameter fore to aft. Assigned to the United States of America as represented by the Secretary of the Navy. Filed Nov. 28, 1988. Patent 4,936,092.

Errol P. EerNisse, Salt Lake City,

and **Roger W. Ward**, Park City. A transducer and sensor apparatus and method. Assigned to Halliburton Co., Duncan, Okla. Filed Nov. 10, 1988, a continuation of application Dec. 29, 1986. Patent 4,936,147.

Laird B. Gogins, Salt Lake City. An infinite speed variation, constant power, ripple-free transmission. Assigned to Utah Transmission Corp., Salt Lake City. Filed Nov. 25, 1988, a continuation of application July 2, 1985. Patent 4,936,155.

Jack B. Johnson, 5360 S. Riley Lane, Murray 84107. A concrete saw for cutting sections of a concrete wall. Filed Oct. 31, 1988. Patent 4,936,284.

Aaron A. Hofmann, 1349 E. Princeton Ave., Salt Lake City 84105. A hip prosthesis for implantation into the upper end of the medullary canal of a resected femur. Filed May 13, 1988. Patent 4,936,863.

Robert A. Kruger, Salt Lake City. A method for producing a photographic image of an X-ray pattern. Assigned to Innovative Imaging Sciences Inc., Salt Lake City. Filed May 10, 1989. Patent 4,937,847.

Shane Cummings, 275 W. 400 North, Weber 84032, and **Clay R.**

Invention business booming: 102,712 patents issued in '89

By Barton J. Howell

The patent business is booming. In fiscal 1989, the Patent and Trademark Office issued a record 102,712 patents. In the same period, the average time needed to process a patent application was reduced from 25 months to 18 months.

Using this data with the increasing number of patent applications filed, and the fact that patent No. 4,942,623 was issued July 17, 1990, a little work on the computer shows that patent No. 5,000,000 will be issued Jan. 22, 1991. If you filed a patent application July 23, 1989, there is a chance that you will be awarded the 5 millionth patent from the U.S. Patent and Trademark Office.

The percentage of patents issued to foreign residents had increased steadily for the 25 years prior to fiscal 1989. But in fiscal 1989 the percentage decreased to 46.7 percent from 47.3 percent the preceding year. However, there were 47,967 patents issued to foreign residents in fiscal 1989, compared to 39,535 in the previous year.

Japanese inventors were issued the largest number of patents awarded to foreign residents, with a total of 20,907 in the past year. West Germany placed second with 8,756 patents. California residents led in the United States with 8,508 patents.

Coleman, 1634 S. 350 East, Orem 84058. A swivel seat child walker. Filed Jan. 15, 1988. Design patent 308,841.

Copies of patents may be obtained for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

5 inventions, 1 design earn patents for Utahns

By Barton J. Howell 9-9-90



PATENTS

cover. Filed Sep. 21, 1989. Patent 4,944,340.

■ Larry Casale, 2092 Webster

Five inventions and one design were awarded patents by the United States Patent Office to Utah inventors.

■ Rainey Torrich, 1755 Whispering Oaks, Ogden 84403. Aerodynamic bicycle

Drive, Park City 84060. Diaper for use in toilet training male children or for use by incontinent male adults. Filed June 12, 1989. Patent 4,944,733.

■ Hyun S. Cho, Sandy. Fabrication of supported polycrystalline abrasive compacts. Assigned to General Electric Company. Filed Nov. 30, 1988. Patent 4,944,772.

■ Guy B. Alexander, Salt Lake City, and Ravindra M. Nadkarni, Wrentham, Mass. Method for electroless plating of ultrafine or colloidal particles and products produced thereby. Assigned to Leach & Garner, North Attleboro, Mass. Filed April 11, 1988. Patent 4,944,985.

Director says cold fusion not dead

Claims 92 research groups have reported positive findings

SALT LAKE CITY (AP) — Research findings favorable to the theory of cold fusion may be on an upswing, said Fritz G. Will, director of the National Cold Fusion Institute at the University of Utah.

Will said that in the past 18 months, 92 research groups in the United States and nine other countries have reported some positive findings, either in the form of excess heat or emissions of nuclear byproducts, including tritium, neutrons, X-rays or gamma rays.

"I want to quickly point out that it is impossible to scrutinize all of these reported findings, but the list is much larger now than it was a few months ago," Will said in a news release.

Chemists B. Stanley Pons and Martin Fleischmann announced at the university on March 23, 1989, that they had generated excessive heat in an electrolysis process at room temperatures using a palladium cathode and platinum anode in a solution containing heavy water. They attributed the heat to fusion of atoms of deuterium, an isotope

of hydrogen.

Difficulties in reproducing the findings have brought considerable skepticism among scientists.

However, Will said some scientists in the United States, Japan, India, Italy, the Soviet Union, Canada, West Germany, China, Bulgaria and Spain have reported some positive results.

Will estimates that more than 300 scientists around the globe have taken part in a wide variety of experiments that report some evidence of possible nuclear processes.

Thirty-three laboratories have reported excess heat and 15 laboratories both excess heat and some evidence of radiation emissions.

Will said he is encouraged especially by the work at the Los Alamos National Laboratory in New Mexico, the University of Hawaii and the Colorado School of Mines.

Thomas Claytor at Los Alamos is using a device made of alternating layers of palladium and silicon,

Will said. Claytor puts the into deuterium gas, applies an electrical field and looks for neutrons and tritium particles.

In more than half his experiments, he finds neutrons as well as tritium, and, rather consistently, a ratio of tritium atoms to neutrons that is unexplainable by conventional nuclear physics, Will said.

Bruce Liebert and Bor Yann Liaw at the University of Hawaii have substituted molten salt for heavy water, and report producing heat at rates 10 times the electrical energy input to the device. The experiment, however, produced no evidence of nuclear byproducts.

Will also cited palladium gas-phase experiments at the Colorado School of Mines, where a fusion research team reported triton emissions. A triton is a charged tritium atom or a tritium ion. He said the Colorado group has measured the energy of the tritons coming out of the electrode in the vicinity of four million electron volts.

New Utah patents involve well drilling and laser probe

By Barton J. Howell

27 Jan 1991



PATENTS

Well drilling, X-ray imaging and a laser probe are among the inventions by Utah residents resulting in patents from the United States Patent Office.

Thomas H. Wood, Roy. An apparatus for use in removing a bearing from its support mounting. Filed Aug. 7, 1989. Patent 4,977,661.

George D. Hessenthaler, Murray. Multiple angle jointer and planer knives for woodworking machines. Filed Feb. 16, 1990. Patent 4,977,937.

Jeffrey J. Schwoebel, South Jordan, and Terry L. Logan, Park City. A gob methane drainage process for use in coal mining operations. Assigned to Resource

Enterprises Inc., Salt Lake City. Filed Oct. 26, 1989. Patent 4,978,172.

Joseph R. Bentley, Holladay. A laser-energizable thermal probe assembly for medical treatment. Assigned to HGM Medical Laser Systems Inc., Salt Lake City. Filed Aug. 11, 1989. Patent 4,978,346.

Gregory H. Kisor, West Jordan, James F. Parker, Provo, and Edward J. King, Fremont, Calif. Method and apparatus for vector quantization by hashing. Assigned to Information Technologies Research Inc., Utah. Filed Jan. 30, 1989. Patent 4,979,039.

Carl C. Ketcham, Bannion. Method and apparatus for acoustic measurement of mud flow downhole. Assigned to Baker Hughes Inc., Houston. Filed July 17, 1990, a continuation of application May 11, 1988. Patent 4,979,112.

Robert A. Kruger, Salt Lake City. Enhancement system for X-ray imaging. Assigned to Innovative Imaging Sciences Inc., Salt Lake City. Filed May 10, 1989, a continuation of application May 23, 1988. Patent 4,979,201.

Scott R. Watterson, River Heights. Exercise cycle console. Assigned to Proform Fitness Products Inc., Logan. Filed March 21, 1989, a division of application filed April 17, 1986. Design patent 313,055.

Copies of patents are available by number for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

8 patents to Utahns include veterinary vaccine method and artificial-heart device

By Barton J. Howell

2-10-91



PATENTS

Another artificial-heart invention and a calligraphic color display are among the eight patents awarded Utah inventors by the United States Patent Office.

Gordon A. Tibbitts, Salt Lake City. Apparatus for taking formation cores. Assigned to Baker Hughes Incorporated, Houston, Tex. Filed July 6, 1988. Patent 4,981,183.

William T. Dalebout, and Curt G. Bingham, both of Logan. Exercise machines with dual resistance means. Assigned to Proform Fitness Products, Inc., Logan. Filed Feb. 16, 1990. Patent 4,981,294.

Richard C. Lumbert, Lehi. An indwelling apparatus by which a medical patient is subject to involuntary respiratory therapy and aspiration. Filed Nov. 1, 1988, a continuation of patent 4,834,776. Patent 4,981,466.

John W. Holfert, Bountiful, and Don B. Olsen, Salt Lake City. An artificial-heart device for producing heart pumping action as a part of a total artificial-heart implant. Filed Nov. 20, 1989, a continuation of application Aug. 15, 1988. Patent 4,981,484.

Mark C. Hesley, Logan. A method for preparing a veterinary vaccine for immunization of sheep against bacterially induced lamb epididymitis. Assigned to Utah State University Foundation, Logan. Filed Sep. 17, 1987, a continuation of application Mar. 7, 1986. Patent 4,981,685.

Richard A. Hintze, Sandy. A color display system for providing a dynamic color presentation using calligraphic display signals. Assigned to Evans & Sutherland Computer Corp., Salt Lake City. Filed Sep. 19, 1986, a continuation of application Oct. 5, 1978 and patent 4,499,457. Patent 4,982,178.

C. Martin Rasmussen, Fruit Heights. Camper tie-down holder. Assigned to Recreation Systems, Inc., Fruit Heights. Filed Oct. 9, 1987. Design patent 313,338.

Eugenia N. Peterson, Salt Lake City. Necklace. Filed July 12, 1982. Design patent 313,368.

Copies of patents are available by number for \$1.50 from Box 9, Patent and Trademark Office, Washington D.C. 20231.

19 patents granted to Utah inventors

By Barton J. Howell *21 Apr 91*



PATENTS

Nineteen patents have been awarded to Utah inventors by the U.S. Patent Office.

Simon Soul-Sun Goe, Snowville. A method for preparing harvested brine shrimp cysts for storage, shipment and later use as fish food. Filed April 19, 1988. Patent 4,996,780.

Dan E. Fischer, Sandy. A device for storing and dispensing gloves. Assigned to Ultradent Products Inc., Salt Lake City. Filed June 28, 1988. Patent 4,997,105.

Dan E. Fischer, Sandy. An apparatus for controlled application of a dental agent to a predetermined tooth surface. Assigned to Honda Giken Kogyo Kabushiki Kaisha, Tokyo, Japan. Filed June 22, 1988. Patent 4,997,371.

E. Marlowe Goble and W. Karl Somers, both of Logan. Endosteal fixation stud and system. Filed Jan. 16, 1990. Patent 4,997,433.

William L. Vetter, American Fork, and Dennis L. Mortensen, Sandy. A method of cleaning and rinsing wafers used in the production of integrated circuits. Assigned to Bold Plastics Inc., West Jordan. Filed Aug. 2, 1990. Patent 4,997,490.

Ronald L. Atwood, Farmington. Air-sparged hydrocyclone separator. Assigned to Advanced

Processing Technologies Inc., Salt Lake City. Filed Sept. 19, 1989. Patent 4,997,549.

Mark S. Lamon, Snowville. A device for harvesting brine shrimp cysts from a body of brine having such cysts in a thin layer at its surface. Filed Aug. 15, 1989. Patent 4,998,369.

Michael V. Orton, Manti. An alignment and lateral support member for use in laying common concrete blocks. Filed Nov. 17, 1989. Patent 4,998,397.

David P. Brown, Salt Lake City. U-shaped pipe clamping system. Assigned to Baker Hughes Inc., Houston. Filed Jan. 23, 1990. Patent 4,998,691.

John Hyll, Salt Lake City. A vane core assembly for use in forming a vane passage in an injection-formed, elastomer-covered, closed-shroud impeller. Assigned to Baker International Corp., Houston. Filed March 21, 1988, a continuation of patent 4,732,541, which is a division of patent 4,706,928. Patent 4,998,706.

Scott R. Watterson, River Heights; Donald J. Standing; and William T. Dalebout, Logan. Exercise machine controller. Assigned to Proform Fitness Products Inc., Logan. Filed Feb. 3, 1989. Patent 4,998,725.

Donald B. Paxton, Brigham City; Donald R. Lauritsen, Hyrum; and Scott R. Anderson, Syracuse. Two-stage automotive gas bag inflator using igniter material to delay second stage ignition. Assigned to Morton International Inc., Chicago, Ill. Filed March 26, 1990. Patent 4,998,751.

Ralph E. Hannah, Sandy. A hand-held aspirat-

ing device. Assigned to Unimed Inc., Salt Lake City. Filed Feb. 1, 1990. Patent 4,998,915.

Milton B. Thacker, Salt Lake City; John M. Limburg, Murray; and Vincent J. Memmott, Centerville. Low profile fluid catalytic cracking apparatus and process. Filed Aug. 25, 1989, a division of application Jan. 29, 1988, which is a continuation of applications Feb. 9, 1987, and Dec. 2, 1987. Patent 4,999,100.

C. Lynn Peterson, Salt Lake City. Method and apparatus for separating solids from liquids. Assigned to Peterson Filters Corp., Salt Lake City. Filed Feb. 3, 1989, a continuation of application Aug. 19, 1985. Patent 4,999,115.

Melvin G. Bowman, Pleasant View. Thermochemical cycle for splitting hydrogen sulfide. Filed Dec. 8, 1988. Patent 4,999,178.

Paul W. Rives, Roy, and John B. Sereika, Brigham City. Baby bottle holder. Assigned to Third Hand Corp., Brigham City. Filed Nov. 23, 1987. Design patent 315,264.

Richard B. Stringham, Bountiful. Carousel cosmetic case. Filed Oct. 2, 1989. Design patent 315,228.

John L. McFarland, Roy. Marking caliper. Filed Oct. 31, 1988. Design patent 315,317.

Copies of patents are available by number for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

Vacuum-cleaner magnet may draw fame to Idaho inventor

By Paul Beebe
The Idaho Statesman

EAGLE, Idaho — In the world of vacuum cleaners, David Korsen has an idea that is picking up a lot of attention.

Korsen, of Eagle, has invented VacuMag, a magnetic strip that attaches to the front bumper of a vacuum cleaner.

The strip picks up metal objects before they can be sucked inside and damage the inner workings of the machine.

"I own a janitorial company and we used another magnet on our vacuum cleaners. It didn't work properly," said 27-year-old Korsen.

"I just wanted to make one that would not only be better for the janitor who uses one every day but also one for the housewife," he said.

So Korsen, who owns Associated Maintenance Management and Security in Boise, set about inventing VacuMag last year.

It is slimmer, attaches magnetically instead of with bolts, is easy to clean and adjustable, unlike what he was using before.

With help from investors, he incorporated a new company, Korsen Industries, in January and began producing the \$17 magnets.

He appears ready to hit the jackpot.

In April, VacuMag was demonstrated on ABC television's "Live — Regis and Kathy Lee," an hourlong talk show starring Regis Philbin and Kathy Lee Gifford.

Don Aslett, the self-styled "America's Number One Cleaning Expert" and author, promoter and owner of Pocatello-based Varsity Contractors that provides janitorial service in 16 states, endorsed VacuMag.

Aslett, 55, said he discovered VacuMag at a trade show in Las Vegas in February. He liked it so much that he decided to promote it on television, at no charge to Korsen.

"It's pretty fantastic," said the author of such best-sellers as "Is There Life After Housework?" "Clutter's Last Stand" and

"How Do I Clean a Moosehead?"

"Vacuum cleaners are a huge thing in people's lives," Aslett maintained. "Nails, screws, bolts, the little fixtures on the backs of pictures — they can trash out a vacuum. It's just a good idea. It's almost like a filter. It filters out the iron," Aslett said.

A patent is pending on VacuMag, Korsen said. He has seven employees who make the strips. But out of concern that others might steal or copy his invention, Korsen does not want to publicly reveal where they are made.

"It's more important to me to keep this location secret than it is to get the publicity," he said.

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Bumper crop of devices that Utahns created OK'd by Patent Office

By Barton J. Howell



PATENTS

A bumper crop of eight mechanical, one electrical, and two chemical inventions by Utah inventors resulted in patents from the U.S. Patent Office.

Stephen C. Jacobsen and John E. Wood, both of Salt Lake City. A force transducer comprising an annular frame and detection means. Assigned to Sarcos Group, Salt Lake City. Filed Sept. 11, 1990, a division of patent 4,964,306. Patent 5,016,481.

Roy S. Ludlow, Salt Lake City. Boat hull. Filed Feb. 5, 1988. Patent 5,016,552.

V. John Tilby, Salt Lake City. A silencer for the bowstring of an archery bow. Assigned to Sportsmen's Outdoor Products, Salt Lake City. Filed March 13, 1990. Patent 5,016,604.

Doug W. Krahensbuhl, Sandy. An ankle support comprising a foot support that is open at a top and has an open front. Filed March 14, 1990. Patent 5,016,623.

Russell G. Bulloch, Orem, and **Craig K. Garrick**, Provo. A dual action exercise device. Filed Feb. 9,

1990. Patent 5,016,870.

William T. Dalebout and Curt G. Bingham, both of Logan. A controller for use with an exercise machine. Assigned to Proform Fitness Products Inc., Logan. Filed Nov. 1, 1989. Patent 5,016,871.

Robert E. Carter, Pleasant Grove. Automobile bumper with storage compartment. Filed March 16, 1990. Patent 5,016,932.

Terrance J. Dahl, Salt Lake City. Centrifugal blood pump and magnetic coupling. Assigned to St. Jude Medical Inc., St. Paul, Minn. Filed March 6, 1989. Patent 5,017,102.

Randy W. Wahlquist, Ogden; **John M. Reinarts**, North Ogden; and **Timothy L. Francis**, Ogden. Utilization of sponge metal fines. Assigned to Westinghouse Electric Co., Pittsburgh, Pa. Filed May 21, 1990. Patent 5,017,219.

Lawrence D. Lawrence, Sandy, and **Walter B. Sudweeks**, Orem. Shock-resistant, low density emulsion explosive. Assigned to IRECO Inc. Salt Lake City. Filed Dec. 26, 1989. Patent 5,017,251.

Michael L. Wilson, Salt Lake City. A digital variable rate clock synthesizer. Assigned to Unisys Corp., Blue Bell, Pa. Filed Nov. 21, 1989. Patent 5,017,170.

Copies of patents are available by number for \$1.50 from Box 9, Patent and Trademark Office, Washington DC 20231.

Vacuum-cleaner magnet may draw fame to Idaho inventor

By Paul Beebe
The Idaho Statesman

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